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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/703,542

11/01/2000

Simon Love

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01/29/2004

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EXAMINER

EMDADI, MEHDI

ART UNIT

PAPER NUMBER

2663

DATE MAILED: 01/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/703,542

Applicant(s)

LOVE ET AL.

Examiner

Mehdi Emdadi

Art Unit

2663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 November 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-7, 9-14, 16-18 and 20 is/are rejected.
- 7) ☒ Claim(s) 4, 8, 15 and 19 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Title

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The new title should preferably depict the concept of "configuration determination." Further the term "passive" should be used, to depict the gist of the invention.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
3. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Hershey et al. (US Patent. No. 5,793,753).
4. Regarding claim 1, Hershey et al. disclose: "A system for monitoring and managing the operations of a multi-technology telecommunications network" (Fig. 2) (monitoring, data packets, plurality of nodes.) This monitoring system physically connects to the network (physical connection). (See Fig. 2, 22a and 22b). Hershey et al. teach: "It is preferable that such probes be nonintrusive or passive " (Col. 1, line 52) (plurality of measurement

probes...passively), "and for collecting ...said data transfer activity"
(collecting the data), "Associated with probes ... are interpreter workstations
(computational units)... communicate with one or more probes (receiving
... from a respective one of the plurality of probes)...configuration
parameter...The workstation interpreter processes (producing) ...in an easily
viewable format (characterization)" (Col. 3, lines 43-53), "to monitor several
network functions including network configurations" (Col. 6, lines 36-37)
(generating a system configuration... from the data stream
characterization).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all
obviousness rejections set forth in this Office action:

- a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2, 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over
Hershey et al. in view of Galloway (US Patent No. 5,430,709).

7. Regarding claim 2, Hershey et al. do not disclose hash values. However, in a
related invention, Galloway discloses: "storing the said call records of said active
group (set) in a hash table (array of hash values) with the call record

relevant to a particular said protocol data unit (selected data packets) being accessed in said hash table by use of a hash key formed from the said connection identifier (invariant portion) associated with that protocol data unit (selected data packets taken from the set)" (Col. 14, lines 25-30). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to include hash tables constructed based on invariant portion(s) of received data packets in order to develop data stream characterization.

8. Regarding claim 5, the rejection cited for claim 2 applies since no specifics about "groups of data" and "subsets" are provided in the claim.
9. Claims 3, 6, 7, 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hershey et al. in view of Galloway and further in view of Egbert (US Patent No. 6,356,551).
10. Regarding claim 3, Hershey and Galloway do not disclose a number of times each possible hash value occurs. However, Egbert discloses: "monitoring of the number of table entries for a given bin" (Col. 12, lines 29-30). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to include a number of times each possible hash value occurs as a criterion for data stream characterization.

11. Regarding claims 6, 7, 9, Hershey and Galloway do not disclose an XOR hash algorithm. However, Egbert discloses: "The hash polynomial generator 100 includes ..., a series of exclusive OR gates (XOR) 204, and a shift register 206." (Col. 13, lines 3-5) (XOR hash algorithm). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to choose an XOR hash algorithm for characterization.

12. Claims 10, 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hershey et al. in view of Ahearn et al. (US Patent No. 5,926,463).

13. Regarding claims 10, 11, Hershey et al. do not disclose configuration generation via successively comparing data stream characterizations. However, in a related invention, Ahearn et al disclose: "After a configuration poll is completed, the Router Watch means will compare the received data to the previous data (successively comparing) (current baseline plus deltas from all configuration polls since the baseline) and detect any differences" (Col. 8, lines 25-28) (find matching - claim 10, identify matching - claim 11). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to use a comparison technique to find configuration differences and in the case of no change, take the matching pairs, to characterize the system.

14. Claims 12, 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hershey et al. in view of Galloway and further in view of Ahearn et al. (US Patent No. 5,926,463).

15. Regarding claim 12, Hershey et al. and Galloway do not disclose how to determine a data stream characterization. However, Ahearn et al. disclose: "information about the interfaces is stored in the statuswatch database." (Col. 16 lines 40-41) (Recording peripheral information). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to record peripheral information presented in data streams to characterize the system configuration.

16. Regarding claim 13, Hershey et al. and Ahearn do not disclose packet Sets, array of hash values, selected data packet (this implies a selection process as well), invariant portions, and selected packets from a set. However, Galloway discloses: "storing the said call records of said active group (set) in a hash table (array of hash values) with the call record relevant to a particular said protocol data unit (selected data packets) being accessed in said hash table by use of a hash key formed from the said connection identifier (invariant portion) associated with that protocol data unit (selected data packets taken from the set)" (Col. 14, lines 25-30). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to include

hash tables constructed based on invariant portion(s) of received data packets in order to develop data stream characterization.

17. Claims 14, 16, 17, 18, 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hershey et al. in view of Galloway, Ahearn et al., and further in view of Egbert.

18. Regarding claim 14, see the rejections cited for claim 13 above. These rejections do not cover counting occurrences of hash values and their storing in an array. However, Egbert discloses: "monitoring of the number of table entries for a given bin" (Col. 12, lines 29-30) (counting) and "The host 40 also includes a nonvolatile memory 122 that stores a plurality of hash configuration values" (col. 12, lines 36-37)(storing). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to include counting and storing of the occurrences of hash values as a criterion for data stream characterization.

19. Regarding claim 16, see rejections cited in claim 14 above. These rejections cover the limitations stated in claim 16, since no description for terms: "subset" and "groups of data" are provided in the claim.

20. Regarding claims 17, 18, 20, Hershey et al, Galloway, and Ahearn et al. do not disclose an XOR hash algorithm. However, Egbert discloses: "The hash polynomial generator 100 includes ..., a series of exclusive OR gates (XOR) 204, and a shift register 206." (Col. 13, lines 3-5) (XOR hash algorithm). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to choose an XOR hash algorithm for characterization.

Allowable Subject Matter

21. Claims 4, 8, 15, 19, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mehdi Emdadi whose telephone number is (703) 305-8709. The examiner can normally be reached between the hours of 8am and 5pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen, can be reached at (703) 308-5340. The fax phone numbers for the organization where this application or proceeding is assigned is (703) 872-9314 for regular communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

M. Emdadi

M. Emdadi

Date: 1/22/2004

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